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INTEGRATED AMPS/RECEIVERS

Cayin A-300B integrated amplifier

Art Dudley, February, 2007

"Guitar groups are on the way out, Mr. Epstein."—Dick Rowe, Decca Records, 1962

By now, even the shortest-sighted cynic has to admit that the single-ended-triode (SET) amplifier, which reappeared on the domestic audio scene over a decade ago, represents more than just a passing fad. And while no amp of such questionable relevance to the average loudspeaker will ever be considered the norm, so is it true that the SET's charms have earned it a permanent seat at the table. There will always be manufacturers who want to build SETs, just as there will always be people who want to perform Shakespeare or distill absinthe.

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The genre has also had a lucky break: the SET revival was followed closely by the emergence of a new manufacturing power, one with both a flair for tube electronics and the geopolitical wherewithal to keep consumer prices low. That power, of course, is the People's Republic of China—from which I'm happy to see new single-ended products regularly emerge.

Consider the Cayin A-300B integrated amp, made by Spark (aka Zhuhai Spark) of Guangdong Province. Ten or more years ago, you *might* have been able to find a 300B integrated amp this well built, and you *might* have been able to find a 300B amp this affordable—but you certainly wouldn't have found both in the same package.

Description

The package in question is a lushly chromed chassis with a terraced aluminum alloy faceplate, sculpted housings for the mains and output transformers, and a thickly enameled protective cage that fits so beautifully, you'd think someone actually cares whether or not you like it. An alloy remote control is also a part of the scenery.

Inside the A-300B is a mix of circuit boards and point-to-point wiring, each doing the job it ought to be doing. Remote-control circuitry, a phalanx of relays for input selection, and other bits and pieces account for the circuit board, while the wiring is well represented—and remarkably well executed—throughout most of the audio and power-supply circuitry. The wiring is neat, the soldering is saintly, and the parts are nice enough, with a sprinkling of such names as Multicap, Nichicon, and Alps. Inside my review sample were no rough metal edges, no questionable solder joints, and not so much as a speck of dust.

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The A-300B's power supply holds no surprises, although I *am* impressed that, forward of the AC transformer (a toroid), it's an entirely dual-mono design. I'm also struck by the size and quality of the electrolytic capacitors chosen to smooth the AC: They share a pi filter of the usual sort with a hefty, frame-style choke. Each channel has its own 5AR4 tube for B+ rectification, while lower voltages (for tube filaments and logic circuits—a lovely if odd juxtaposition) are uncurled with solid-state rectifier blocks.

The Cayin's amplification design is similarly straightforward: The high-level input signal is directed to a 100k ohm volume potentiometer, from whence it's capacitively coupled to the grid of a 6SL7 dual-triode cascade, for pure voltage gain. The final plate of that tube drives the grid of a 6SN7 dual triode, configured as a cathode follower for low impedance. The full waveform then goes to the grid of a 300B output triode—biased, of course, for pure class-A operation.

The output tubes are run in fixed-bias mode, and each channel has its own easily accessed bias trim pot (a decent-quality digital voltmeter is required). My review sample of the A-300B arrived perfectly well adjusted for the Chinese output tubes supplied, and has required little in the way of further attention. (The Cayin's packing materials are good enough that the amp can be shipped with every tube in place.) There's also a heater-balance pot for each output tube, so the user can adjust the outputs for minimal hum as the tubes age. Filament voltage for each directly heated 300B is rectified, and appears to be just a shade over 5V. On the anode side of the tube I found a rail voltage of about 388V DC—neither the highest nor the lowest one sees in contemporary 300B amps.

The Cayin's circuitry may be straightforward; its transformers are anything but. According to the importer, VAS Industries, Inc., the primary and secondary windings of the frame-style output trannies are coated and sealed *in vacuum chambers* prior to being potted in the more traditional sense. That's done in the interest of preventing vibrations and enhancing consistency, longevity, and noiselessness.

Indeed, the Cayin A-300B was among the quietest single-ended amps I've used, in every way. I couldn't hear a bit of mechanical sound from the vicinity of the amplifier itself, and only the faintest 60Hz hum through my very efficient Lowther PM2A drivers/Medallion horns. Used with the somewhat less sensitive (92dB, as measured by John Atkinson) but still very efficient [Audio Note AN-E Lexus Signature](#) speakers, the Cayin was virtually silent at idle.

The A-300B's user controls are minimal. There's a large volume control at the center of the front panel, and to its right a small button for toggling through the various input selections (including the selection for an outboard preamplifier). One more button allows the user to toggle between zero and minimal feedback; I preferred and relied exclusively on the former. The remote handset duplicates all of those controls and adds one more: a mute toggle. Sadly, the A-300B has neither a balance knob nor a mono switch.

Setup and listening

I tried the Cayin A-300B in a variety of settings, but always as an integrated

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amplifier. (One can use it as only a power amp by driving a dedicated pair of input jacks with a separate preamp.) In my living room (19' by 27'), the A-300B drove the aforementioned Audio Note *and* Lowther loudspeakers. In my much smaller (12' by 18') listening room, it drove the Lowthers and a supplemental choice of speaker (see below). At no time did I hear the sort of clipping that might have suggested I'd pushed the A-300B too far.

Despite its pristine condition, I had the sense that my sample of the Cayin had been run-in ahead of time—either that, or the A-300B just isn't one of those products whose sound changes appreciably during the first few days or weeks of use. In any event, I was impressed from the start by the A-300B's very wide bandwidth—for a SET amp. My first 300B experience was 10 years ago, with the Cary Audio Design 300 SEI (\$4500), a sweet-sounding product that was also very good-looking and pleasant to use. The Cayin's top-end extension, in particular, went beyond the Cary's, with open-sounding trebles and a clean, nongritty way with such sounds as cymbal decays and the very highest notes in the piano's right hand.

But the Cayin's greatest strength may be its sheer musicality—which, again, means nothing more or less than the ability to reproduce sound in a manner that's consonant with music, as an event in time carried by distinct pitches and rhythms. The Cayin was as pitch-certain an amp as I've ever heard: I could listen to it for literally hours on end without the sort of fatigue brought on by electronics that fail in that regard—and, in fact, complex lines seemed musically clearer than usual. Violinist Marianne Rônez's cadenza in the *Prelude* of Biber's first *Mystery Sonata* (CD, Winter & Winter 910 029-2) was fiercely clear and easy to follow. Similarly, the crazy polyrhythms, bass-guitar chording, and soprano-sax improvisations in Captain Beefheart's "Japan in a Dishpan," from *Lick My Decals Off, Baby* (CD, Enigma Retro 7 73394-2), were *clearly* crazy.

On a related matter, the Cayin A-300B's ability to uncover softly played lines and to present them with as little musical ambiguity as possible was quite good. The fairly recent recording of Mahler's early cantata, *Das klagende Lied*, by Michael Tilson Thomas and noted soloists (CD, BMG 68599-2), showed off the Cayin's ability to pull melodies from the mess, seemingly at the listener's will. My listening notes also point to the George Szell recording of Strauss's *Don Juan* (SACD, Sony SS 89037). Admittedly, the Strauss disc already has a lot going for it in that regard, thanks to a combination of good sound and Szell's unusually clear musical direction; still, the Cayin framed and enhanced those qualities, making it easy for me to understand what the cellos or violas were doing at any given moment.

The Cayin's way with *sonic* details was just a bit off by comparison—and not *quite* as good as a typical 2A3-based SET. Although the A-300B brought a fine sense of clarity to Mieczyslaw Horszowski's slurry performance of Chopin's Waltz No.7 in C-sharp Minor, Op.64 No.2 (CD, BBC BBCL 4122-2), without making it sound overly mechanical in the manner of other, lesser amps, it was less successful than my Fi 2A3 Stereo at capturing the pianist's many instances of singing or humming along with the music. It was also less explicit with the intakes of breath heard throughout Nick Drake's "Way to Blue," from *Five Leaves Left* (CD, Island 422 842915-2, footnote 1), or the sounds of the many splices in the well-known Donald Johanos recording of Copland's *Fanfare for the Common Man* (LP, Vox Turnabout TV

34169).

But you could be forgiven for forgetting all that, in light of the Cayin's embodiment of that greatest of all SET strengths: the manner in which it let solo voices and solo instruments pull themselves out of the mix to appear before me with a presence unequaled by other amp technology. On the Nick Drake track, Drake's voice was utterly *there*. On the Rachmaninoff *Symphonic Dances*, from another great Johanos LP (LP, Vox Turnabout TV 341 45S), the saxophone was all but in the room, and had all of the spatial realism and texture I could have hoped for.

Remarkably—or not, I suppose—the Cayin was able to drive my Quad ESLs from its 16 ohm taps. Not only that, but at sensible volumes, the combination could even rock. I put on R.E.M.'s *Reckoning* (LP, IRS SP70044) without expecting much—and was utterly amazed by the decent sense of momentum and lack of egregious puffiness or slowing. Sure, the electric-bass notes *billowed* a bit more than they should have. But their attack components lined up well enough that rhythm and pacing didn't suffer at all.

The Cayin rocked out even more with my Lowther Medallion horns, of course, where a lack of bass extension was made up for by even more of a sense of momentum—and a great deal more impact on percussive sounds. The amp fairly tore through R.E.M.'s "Pretty Persuasion," also from *Reckoning*. For that matter, on every cut, Bill Berry's snare drum jumped realistically out of the mix, along with various other percussion instruments (the anvil-like sound in "Time After Time" being another example). The A-300B's lowest registers also sounded tighter and more controlled than I'm used to hearing from a 300B; SET aficionados will understand when I suggest that this is one of the few 300B amps I've heard that has 2A3 bass!

As with virtually all pairings of SETs and sympathetic loudspeakers that I've heard, orchestral music had fine scale and drama: Dynamic shadings were realistic, and peaks in the music startled me more than once. Through the Audio Note speakers in my living room, Furtwängler's astonishingly dynamic (mono) recording from 1951 of Beethoven's Symphony 9 (EMI 5 66953 2) was mesmerizing. I confess that I tried doing something else—paying bills—while listening to that with the Cayin amp one afternoon. I failed.

I hesitate to single out the Cayin A-300B for a description of its colorations, if only because they were the sort that seem endemic to 300B amplifiers. In particular, its sound was a little thicker than ideal in the upper bass and lower mids (not unlike a certain Scottish turntable I know and love). Tim O'Brien's voice is one that I know well, and on such albums as his own *Two Journeys* (CD, Howdy Skies HS-1004) and guitarist Slavek Hanzlik's *Fall of My Dreams* (CD, Sierra HS 67011-2), that voice was just a shade chestier—or diaphragmier—than real.

With my own Western Electric 300Bs in place of the stock Chinese output tubes, the Cayin lost some of that upper-bass plumminess—and gained both clarity and, especially, precision of stereo imaging. All the players in the breakneck "John Hardy" on Tony Rice's *Cold on the Shoulder* (CD, Rounder CD 0183) were more

definite in their positions on the imaginary stage.

All in all, fine performance: more refined and more extended than the typical 300B SET, with all of the presence, drama, and textural richness the genre has to offer. A really nice amp.

Conclusions

If you happen to hear a great piece of music for the first time on a cloudy day, your point of view on that piece will forever be set a certain way. You can try all you want to explain your point of view—but how can you explain a cloudy day?

That's more or less how I feel about single-ended-triode amps: They make me listen to music a bit differently. How could I possibly describe such a thing?

I can try—certainly *have* tried—for a number of years. But there comes a point when the reader simply must have the experience for himself. Here's an opportunity. And it's one that I would never have expected even a few years ago.

The Cayin A-300B is a lovely product: intelligently designed, reassuringly well made, and achingly musical. If a domestic amplifier that sells for \$3195 can be said to be a bargain, this is it—and while it's possible to get a little more by spending a lot more, it isn't possible to embarrass the A-300B in any way, to any extent. You could live with this forever.

Footnote 1: A fine-sounding digital reissue—and the rare "Red Book" CD that is not, in my opinion, improved on at all by DSD remastering (*cf* the compilation *Nick Drake: A Treasury*, Island B0003518-36).

Article Continues: [*Specifications*](#)

COMPANY INFO

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